

A Multilevel Examination of Racial Disparities in School Discipline: Black and White Adolescents' Perceived Equity, School Belonging, and Adjustment Problems

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Abstract

National data have shown for decades that Black students experience more frequent and severe disciplinary actions that remove them from school (e.g., suspension), compared to their White peers. Despite extensive research documenting the sequelae associated with suspension (e.g., school drop-out and delinquency), there has been relatively scant research addressing the discipline gap as it relates to students' sense of belonging and equitable treatment at school, or to potential adjustment problems it make evoke. The present observational study examined the Black-White discipline gap in 58 high schools with a sample of 19,726 adolescents (Black $n = 7,064$, White $n = 12,622$) in Maryland. Employing a multilevel framework and leveraging data from the U.S. Department of Education's Office of Civil Rights and the student-report Maryland Safe and Supportive Schools (MDS3) School Climate Survey, we characterized 58 high schools by their excess in Black relative to White student risk of out-of-school suspension. We then assessed whether Black students' excess risk of out-of-school suspension was negatively associated with perceived school equity and school belonging, and positively associated with adjustment problems (i.e., externalizing symptoms) in a stratified analysis of White and Black students. We found that school-level discipline gaps were associated with Black students' perceptions of less school equity ($\gamma = -.54, p < .001$), less school belonging ($\gamma = -.50, p < .001$), and increased adjustment problems ($\gamma = .77, p < .001$), even when accounting for student demographics (i.e., gender, grade level, socioeconomic status) and school-level contextual factors (i.e., socioeconomic status, student diversity, overall suspension rates), whereas these associations were not significant for White students. Study findings have implications for educational reform in high schools in which out-of-school suspension practices differ by race.

Keywords: discipline gap, discipline disproportionality, race, peer relations, adjustment

Educational Impact and Implications Statement

How high school students feel about the climate of their schools impacts their achievement and success. This study suggests that Black students feel differently about how equitable and inclusive their schools are, depending on the extent to which Black students are disproportionately suspended. In schools that differentially suspended Black students, Black students reported less school belonging and equitable treatment, and more adjustment problems, relative to Black students in schools with lesser discipline disparities. These patterns of association were not found for White students. Study findings suggest that, in addition to alternatives to suspension and equity focused interventions to eliminate the gap, more immediate social, emotional, and psychological supports for Black youth in schools with highly differential discipline practices may be needed.

A Multilevel Examination of Racial Disparities in High School Discipline: Black and White Adolescents' Perceived Equity, School Belonging, and Adjustment Problems

Studies examining demographic correlates of school discipline exposure have found overwhelmingly that Black students are disciplined at higher rates than White students. This trend has persisted across a range of different types of school sanctions (Gregory, Skiba, & Noguera, 2010), including office discipline referrals, suspensions, and expulsions (Krezmien, Leone, & Achilles, 2006; Losen, Hodson, Keith, Morrison, & Belway, 2015; Porowski, O'Conner, & Passa, 2014; Skiba et al., 2011; Smith & Harper, 2015; Vincent, Tobin, Swain-Bradway, & May, 2011; Wallace, Goodkind, Wallace, & Bachman, 2008). Research examining the underlying dynamics of racial discrepancies in school discipline has uncovered a pattern of differential treatment, in which Black students tended to be overrepresented in referrals for defiance and other subjective offenses, whereas White students were more often disciplined for objective infractions (e.g., smoking on school grounds, fighting; Gregory & Weinstein, 2008; Skiba, Michael, Nardo, & Peterson, 2002). Gender is also a factor impacting discipline disparities, as Black males are two times as likely as Black females to be expelled (KewalRamani et al., 2007) and six times as likely as White females to be suspended (Gregory, 1997).

Known as the discipline gap, the excessive suspension of Black students in U.S. schools is deeply concerning in light of evidence suggesting its direct deleterious effects for students who have been suspended, including increased risk of subsequent contact with the juvenile justice system (Fabelo et al., 2011) and school drop-out (Bradshaw, O'Brennan, & McNeely, 2008). Yet few studies have examined the ecological implications of the discipline gap at the school-level. Specifically, it is plausible that Black students in schools with larger Black-White discipline gaps

could perceive that they and their Black peers are not afforded the same fair and inclusive treatment as the White students at their school; this in turn could have an impact on how welcome Black students feel at the school, and their sense of belonging there (Debnam, Lindstrom Johnson, Waasdorp, & Bradshaw, 2014). Social cognitive theory on reciprocal determinism highlights the school social environment as a developmental influence on student adjustment (Bandura, 1989; Eccles & Roeser, 2011), and thus suggests that Black students' interface with discipline disparities may further impact their views of themselves as prosocial and well-adjusted members of the school. To assess these potential relationships, the current study explored school-level discipline disparities in relation to Black and White students' perceptions of school belonging and equity, as well as the degree to which they report experiencing psychological adjustment problems. This line of research will inform our understanding of how students' perceptions of equity and school belonging may vary systematically by their high schools' degree of school-level discipline disproportionality, which in turn may be related to differences in student adjustment problems. These findings also may inform our understanding of intervention and reform efforts in high schools targeting racial differences in their use of out-of-school suspension.

Potential Contributors to the Discipline Gap

The discipline gap has sharply increased in the four decades following the landmark national report that first called attention to racial disparities in school disciplinary outcomes (Children's Defense Fund, 1975). Since the 1972-73 school year, the national rate of out-of-school suspension for Black youth has increased by nearly 200% (from 12% to 23% in 2011-12), whereas for White students, the rate only grew by 12% (from 6% to 7% in 2011-12; Losen et al., 2015). It could be argued that this striking increase in school discipline rates among Black youth

is attributable to an increasing frequency or severity of misconduct; however, empirical research casts doubt on such assertions. Specifically, research exploring potential causes of the discipline gap has found higher rates of sanctioning Black youth, even when levels of misbehavior were similar to their White peers (Finn & Servoss, 2013; Skiba et al., 2002; Toldson, & Lemmons, 2013). Higher rates of disciplining Black youth also persisted even when statistically controlling for teacher ratings of behavior (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010) and other potential confounders such as poverty level (Skiba et al., 2011) and socioeconomic status (Wallace et al., 2008). Thus, the argument that disproportionate discipline practices reflect Black students' elevated misconduct alone has not been substantiated (see Skiba & Williams, 2014 for a review of this debate).

A number of researchers have posited that institutional and individual biases within the school social context are likely also a culprit in school discipline practices that disproportionately punish Black youth (Gregory & Weinstein, 2008; Skiba et al., 2011; Vavrus & Cole, 2002; Wald, 2014). Sociopolitical influences during the 80s and 90s would bolster this supposition. Specifically, during this same time period, a fear of Black youth as "super-predators" (DiIulio, 1995, p. 23) was spreading in mainstream media, and support for three strikes policies and the war on drugs contributed to the disproportionate incarceration of Blacks and Latinos (Alexander, 2010; Neal & Rick, 2014; Gilliam & Iyengar, 2005). It is plausible that similar trends during that time within education, such as the increased use of zero tolerance policies, contributed to the surge in out-of-school suspensions affecting Black youth (APA, 2008).

The causes of widespread and increasing racial discipline disparities are complex. Myriad, interconnected, and reciprocal pathways are likely involved. For example, research on stress and the expression of implicit bias (Kang, Gray, & Dovidio, 2013) suggests that teacher

and administrator stress may interact with biases to contribute to differential responses in disciplinary interactions (McIntosh, Girvan, Horner, & Smolkowski, 2015). Other research has provided evidence of a bidirectional influence of racial bias and disparities in student functioning on one another as part of a mutually reinforcing cycle (Gregory, Skiba, & Noguera, 2010; Skiba et al., 2002; Shirley & Cornell, 2012).

Understanding the Meaning of School-Level Discipline Disparities

Regardless of whether disparate disciplinary outcomes are caused by school staff racial bias, Black students may perceive racial differences in discipline rates within their school as unfair, which in turn may have detrimental effects. Qualitative research examining students' perceptions of the discipline gap suggest that differential discipline practices are very apparent to them and perceived as unjust (Sheets, 1996). For example, a participant in a qualitative study (Howard, 2008) on this issue commented:

I watch it all the time. One of us [Black males] do something, and we get suspended or expelled. A White kid does the exact same thing, and he gets a warning, or an after school referral. Sometimes it's so obvious that they treat us different than them. (p. 971)

Black students in particular report sensitivity to teacher interactions and disciplinary actions that are inequitable (Ruck & Wortley, 2002). Other research has found that discipline disparities are inversely associated with student perceptions of positive racial climate (Mattison & Aber, 2007) and Black students' willingness to seek help from teachers (Shirley & Cornell, 2012).

Taken together, the literature suggests the likelihood that schools with highly differential patterns of suspension by race may be perceived by students as unfair and less inclusive environments, particularly by Black students, whereas schools with less clearly racialized patterns in discipline may be perceived as more equitable. In turn, the degree to which the school

environment is perceived as fair and inclusive, or equitable (Organization for Economic Cooperation and Development, 2008), has been associated with students' sense belonging to the school (Debnam et al., 2014). Yet it is important to recognize that discipline disparities within a school may have different implications for Black and White youth. Although both Black and White student groups may witness the more frequent punitive treatment of Black students, that observation may be experienced more personally by Black students than White students. For example, perceptions of differential treatment have been linked to a host of detrimental developmental outcomes among youth of color, including increases in problem behavior (Bogart et al., 2013) and anger and depression (Wong, Eccles, & Sameroff, 2003), and declines in student engagement (Bingham & Okagaki, 2012; Dotterer et al., 2009). Thus, it is plausible that exposure to school contexts in which Black students are suspended at higher rates than White students may be negatively associated with perceived school equity and school belonging, and positively associated with adjustment problems for Black youth, whereas we might expect little to no influence on White youths' perceptions and outcomes. However, no research to date has empirically examined discipline disparities as a school contextual factor associated with Black and White students' perceptions of themselves or their school. The present study explored the contextual influence within the school social environment as a potential pathway by which the discipline may have deleterious effects for Black youth.

The Present Study

The purpose of this study was to inform our understanding of the discipline gap as a contextual factor linked to students' perceived school equity, school belonging, and adjustment problems. We employed a multilevel latent variable approach utilizing counts of students who received one or more out-of-school suspensions in the 2011-12 school year, available

disaggregated by race from the Civil Rights Data Collection of the U.S. Department of Education, Office of Civil Rights at the school level. At the student level, we employed student report data from the Maryland Safe and Supportive Schools (MDS3) School Climate Survey from the subsequent year (2012-13). We conducted these analyses drawing upon a sample of 19,726 Black and White students in 58 Maryland high schools. We hypothesized that school-level disparity in out-of-school suspensions, operationalized as excess risk of out-of-school suspension relative to White students, would be inversely associated with Black students' perceptions of school equity and belonging (Debnam et al., 2014; Dotterer et al., 2009), and positively associated with self-reported adjustment problems (i.e., externalizing symptoms such as getting mad easily; Bogart et al., 2013), whereas we expected no significant associations in the White sample. We included student-level demographics (gender, grade level, and maternal education as a proxy for socioeconomic status) and school-level factors (percentage enrollment eligible for free and reduced price meals, overall suspension rate, and diversity of student enrollment) as covariates to reduce the risk of confounding in the analysis. This research has potential to inform policy efforts and programmatic targets to mitigate the effects of school discipline disproportionality.

Method

Participants

The sample included 19,726 students (Black $n = 7,064$ and White $n = 12,662$) in 58 suburban and rural Maryland public high schools. All students reporting essential demographics (e.g., race) in the MDS3 school climate survey and all schools for which we had available student survey data were included. We utilized out-of-school suspension data from the year prior (2011-12) to the year student self-report data were collected (2012-13). The sample of Black

students was 49.8% female, had a mean age 15.9, and 39.6% reported their mother had graduated from college; similarly, the White student sample was 50.0% female, had a mean age 15.9, and 44.1% reported their mother had graduated from college. The 58 Maryland high schools had an average of 37.5% low-income students and a mean out-of-school suspension rate of 17.2%. School enrollment averaged 1,262.9 ($SD = 411.8$). From the Civil Rights Data Collection, the average excess in Black suspension risk (possible range -1.00 to 1.00) was .11 ($SD = .09$). An average of 122 Black students per school and 218 White students per school provided data for the study. Additional demographic characteristics are presented in Table 1.

Procedure

We conducted a secondary analysis of school climate survey data from the MDS3 school group randomized controlled trial. Half of the trial schools were randomly assigned to receive training in positive behavior supports (i.e., coaching on implementation of multi-tiered behavior support strategies and interventions), and the other half were randomized to a “business-as-usual” condition, meaning that they received no additional supports. For our secondary analysis, both conditions were included. For the MDS3 trial, twelve of the state’s 24 districts were approached by the Maryland State Department of Education (MSDE) based on perceived need. High schools were then invited to participate in the MDS3 project on a voluntary basis. Anonymous data were collected via a waiver of active parental consent and a youth assent process. All student participation was voluntary. The MDS3 School Climate Survey (Bradshaw, Waasdorp, Debnam, & Lindstrom Johnson, 2014) was administered online in language arts classrooms to approximately 25 classrooms per school, with an approximate distribution as follows: seven 9th grade classrooms and six each of 10th, 11th, and 12th grade classrooms. School staff administered the survey following a written protocol. The researchers’ Institutional Review

Board approved analysis of these data. For additional information on the project, see Bradshaw, Debnam et al. (2014).

Measures

Student (level 1). The source of student-report data for the current study was the MDS3 School Climate Survey, which was developed by a collaborative led by the Johns Hopkins Center for Youth Violence Prevention; for additional details, see Bradshaw et al. (2014). Cronbach's alphas (α) were calculated and reported below in the current sample to assess the internal consistency reliability of key constructs in the study.

Equity. The *equity* scale ($\alpha = .82$; Bradshaw et al., 2014; Debnam et al., 2014; Haynes, Emmons, & Ben-Avie, 2001) was utilized to assess students' perceptions of school equity and cultural inclusion. Three items assessed students' perceptions of equitable treatment based on race, gender, and socioeconomic status (e.g., "At this school, students of all races are treated the same"), and a fourth item assessed cultural inclusiveness (i.e., "The school provides instructional materials that reflect my culture"). The four item response options were on a 4-point Likert scale from *disagree strongly* (1) to *agree strongly* (4), with higher scores indicating higher levels of the construct.

School belonging. Three items from the survey were utilized to assess students' sense of belonging (i.e., "At this school..." [stem]: "I feel like I belong," "I feel close to people," and "I feel like I am part of this school"; $\alpha = .81$). The items were adapted from the California Healthy Kids Survey (Hanson & Kim, 2007; also see Resnick et al., 1997) and response options were on a 4-point Likert scale from *disagree strongly* (1) to *agree strongly* (4), with higher scores indicating higher levels of the belonging.

Adjustment problems. The *adjustment problems* scale included four items that measured the frequency of students' externalizing symptoms (i.e., "I have trouble controlling my temper," "I have threatened to hit or hurt someone," "I do things without thinking," and "I get mad easily"; $\alpha=.80$; Bradshaw et al., 2014) on a four-point Likert scale from *never* (1) to *almost always* (4). These items were adapted from the BASC-2 externalizing scale (Reynolds & Kamphaus, 2004).

Demographics. Students also responded to a series of questions regarding demographic characteristics, including grade-level, gender, and socioeconomic status (SES). Grade levels were 9th, 10th, 11th, or 12th. Gender was coded 2 = male, 1 = female. SES (i.e., maternal education level), was on a scale from (1) *Did not graduate high school*; (2) *Graduated from high school*; (3) *Attended some college*; (4) *Graduated from college*, with a higher score signifying more education and thus higher SES.

School (level 2). School-level demographic data for the 2012-13 school year were obtained from the MSDE, with the exception of suspension data disaggregated by race and ethnicity. Out-of-school suspension data disaggregated by race and ethnicity from the prior school year (2011-12) were obtained from the Civil Rights Data Collection (CRDC; U.S. Department of Education, 2013). Anonymous, cross-sectional student report data for this study were collected online as part of the MDS3 initiative in spring 2013.

Racial gap in out-of-school suspension. School discipline data from the Office of Civil Rights CRDC were available disaggregated by race and gender on the number of students who received one suspension, more than one suspension, and total enrolled for the 2011-12 school year for each of the 58 schools included in the study. For our purposes, these count data were aggregated to create counts of students reflecting both genders (male and female combined) and

who received one or more suspensions. This allowed us to calculate a measure of *excess risk* (calculated as Black students' risk of out-of-school suspension minus White students' risk of out-of-school suspension). Research suggests that White students can serve as an acceptable index group for calculating risk (Skiba, Poloni-Stuadinger, Simmons, Feggins, & Chung, 2006). Risk of suspension for Black students was calculated as the number of Black students suspended (B_S) within each school divided by the total number of Black students (T_B) enrolled in the school (B_S / T_B). Risk of suspension for White students was calculated as the number of White students suspended (W_S) within each school divided by the total number of White students (T_W) enrolled in the school (W_S / T_W). Then, excess Black risk of out-of-school suspension was calculated subtracting the risk of suspension among White students from the risk of suspension among Black students [$(B_S / T_B) - (W_S / T_W)$]. Based on this calculation, the average excess risk of suspension among Black students was .11 ($SD = .09$). The range for the Black-White suspension risk excess was -.14 to +.31; only four schools had excess risk less than 0 (meaning that in four schools, the risk of out-of-school suspension was higher for White students than Black students). In eight schools, enrollment disaggregated by race was not available on the CRDC website. For these schools, enrollment by race was obtained from MSDE. Overall suspension rates were also obtained from MSDE.

School SES. Data from MSDE were used to measure school SES, which was based upon the percentage of students receiving free or reduced price meals (FARMs). A higher FARMs rate indicated a higher concentration of students from low-SES backgrounds. Receipt of FARMs has been shown to be valid indicator of low household income (Ensminger et al., 2000).

Student diversity. Racial/ethnic diversity of each school was characterized using a normalized generalized variance (NGV) statistic (Budescu & Budescu, 2012; Simpson, 1949),

which can be interpreted as the probability of randomly selecting two individuals from a given population that belong to different subgroups (Budescu & Budescu, 2012), wherein the higher the value, the higher the diversity of the population. The statistic was standardized (“normalized”) to create a relative measure of diversity allowing for direct comparisons across groups (bounded ratio $0 \leq GV \leq 1$). Groups included in the calculation of the statistic for all schools were school-level percentage Black, White, Latino, American Indian/Alaska Native, Asian, and multi-ethnic/ multiracial, as reported in concurrent school enrollment records from the Maryland State Department of Education.

Condition. The data for the present study were collected early in the implementation of the multi-year initiative (year 2), and thus intervention effects were not expected. Furthermore, our analyses did not reveal intervention effects on the study variables. Nevertheless, a school-level intervention condition variable was included as a control variable in the models.

Overview of Analyses

Missing data. After dropping students with missing demographic data (e.g., race), descriptive analyses found very little missing data in the student outcomes (<1% of students failed to report on one or more of the items from the demographic or outcome measures). As a result, the reason for missingness was judged to be random after adjusting for observed covariates (i.e., student level demographics were included in the model; Rubin, 1976), and data were assumed to be missing at random (MAR; Arbuckle & Wothke, 1999). Weighted least squares estimation was used in the analysis, which requires somewhat more restrictive assumptions than with the maximum-likelihood estimator (i.e., when missingness is only correlated with the exogenous variables), but yields consistent estimates when these conditions are met (Asparouhov & Muthén, 2010).

Measurement invariance. We examined measurement invariance in the factor structure of a three-factor model of perceived equity, school belonging, and adjustment problems between the Black and White student groups through a series of configural, metric, and scalar models (Meredith, 1993), fit through multiple group CFA in *Mplus* with WLSMV estimation. To test metric invariance, we constrained factor loadings to be equal across groups. Scale factors were fixed at one in one group and free in the other group. Factor variances were free to vary across groups, and factor means were fixed at zero in one group and free in the other group. To test scalar invariance, we constrained factor loadings and thresholds to be equal across groups. Scale factors were fixed at one in one group and free in the other group, and factor means were fixed at zero in one group and free in the other group. Factor variances were free to vary across groups. Following guidelines given by Cheung and Rensvold (2002), measurement invariance was found, with the multi-group model demonstrating adequate fit to the data and the difference in CFI between models at less than .01. Specifically, when comparing metric against configural models, $\chi^2 = 91.90$ ($df = 8$), $p < .001$, $\Delta CFI = .000$, $\Delta TLI = .001$, and $\Delta RMSEA = -.002$. When comparing scalar against configural models, $\chi^2 = 447.47$ ($df = 27$), $p < .001$, $\Delta CFI = -.000$, $\Delta TLI = .001$, and $\Delta RMSEA = -.002$. When comparing scalar against the constrained metric model, $\chi^2 = 414.59$ ($df = 19$), $p < .001$, $\Delta CFI = -.001$, $\Delta TLI = .000$, and $\Delta RMSEA = .000$. These findings supported the assumption of measurement invariance by race.

Collinearity. Correlations of the school-level predictors and student-level outcomes are shown in Table 2. To detect possible collinearity among the independent between variables, diagnostics were conducted to assess variance inflation factors (VIF) across all four predictors. The resulting VIF statistics were all low, ranging between 1.5 and 1.9, suggesting the magnitude of multicollinearity in this analysis was low (Kutner, Nachtsheim, & Neter, 2004).

Multilevel analyses. To examine our central research questions, we estimated two-level models using *Mplus* 7.11. To establish the rationale for our use of multilevel modeling, we calculated design effects, which are influenced by both the intraclass correlation (ICC) and the number of students per school. Design effects estimates greater than 2.0 were taken to indicate clustering was a significant factor which would justify the use of a multilevel approach (Peugh, 2010). In multilevel logistic regression, there is assumed to be no error at level-1; therefore, we assumed the categorical outcomes followed a logistic distribution with a mean of 0 and a variance of 3.29 (Snijders & Bosker, 1999). The resulting design effects ranged from 2.84 to 16.93, indicating the need for multilevel modeling of all three outcomes (perceived equity, school belonging, and adjustment problems) for both Black and White student subgroups.

Thereafter, a stepwise approach to model building was taken, such that the multilevel models were built one variable and one level at a time in order to be sensitive to the stability of findings with and without non-significant effects (Raudenbush & Bryk, 2002). For all outcome variables, we fit logistic multilevel models, treating the indicators of the latent outcome variables as categorical (ordinal), and employing weighted least squares estimation (WLSMV). We generated standardized coefficients as an effect size to allow readers to assess the strength of the associations identified and their practical meaning (Nieminen, Lehtiniemi, Vähäkangas, Huusko, & Rautio, 2013). Degree of model fit was gauged by the chi-square statistic (χ^2), comparative fit index (CFI; Bentler, 1990), non-normed fit index (NNFI, also known as the Tucker-Lewis Index [TLI]; Bentler & Bonett, 1980), and the root-mean-square error of approximation (RMSEA) with 90% confidence interval (RMSEA; Steiger & Lind, 1980). Adequate model fit was determined by chi-square test non-significance $>.05$, CFI $> .95$, TLI $> .95$, and RMSEA $< .05$. With large sample sizes, the chi-square test is known to be sensitive (Marsh, Balla, & McDonald, 1988).

Alternative fit indices based on principals of parsimony (i.e., RMSEA) were therefore referenced to make decisions regarding competing models (Browne & Cudeck, 1992).

We conducted a stratified analysis with Black and White student samples modeled separately. The three outcome variables (i.e., equity, belonging, and adjustment problems) were modeled as latent variables using items measured at the student level (level 1). Predictors included at level 1 were grade-level, male gender, and student SES. Continuous level 1 covariates were group-mean centered to allow for assessment of between-group differences (Croninger, 2013). At level 2, we included the racial gap in out-of-school suspension as the primary independent variable of interest. We also included overall suspension rate, percentage of students receiving FARMs, and the NGV school diversity statistic as covariates of interest, and the MDS3 intervention condition as a control. All continuous level 2 variables were grand-mean centered. To examine whether the racial gap in suspension risk was associated with Black students' perceptions of equity, belonging, and adjustment problems, we examined the between model effects of the racial gap on all three latent outcome variables. The model included the level 1 and level 2 predictor variables' main effects.

Results

Figure 1 and Table 3 present the results for the multilevel models examining student perceptions of school equity and belonging, as well as self-reported adjustment problems. We assessed improvement in the percent between explained of the final model with all covariates plus the racial gap in out-of-school suspension risk indicator over the model with covariates only. We found the absolute difference in the percent between explained was, for Black students, +55.6% for Equity, +20.1% for School Belonging, and +20.6% for Adjustment Problems, and for White students, +0.1% for Equity, -1.0% for School Belonging, and 0.0% for Adjustment

Problems. The change in R^2 for the between model was, for Black students, +.28 for Equity, +.22 for School Belonging, and +.43 for Adjustment Problems, and for White students, 0.01 for Equity, -0.01 for School Belonging, and 0.00 for Adjustment Problems.

Perceived Equity

Racial gap in out-of-school suspension. As hypothesized, the analyses suggested that there was a significant negative association between Black-White out-of-school suspension gap and perceived equity for Black students only ($\gamma = -.54, p < .001$). For White students, a non-significant negative association was found.

Level 1 covariates. The significant finding for Black students held even after adjusting for level 1 demographic covariates (male gender $\gamma = .07, p = .010$; grade level and student SES, all *ns*). For White students, male gender ($\gamma = .08, p < .001$) and SES ($\gamma = .08, p < .001$) were positively associated with perceived equity, whereas there was no significant association between perceived equity and grade-level.

Level 2 covariates. At the school-level, student diversity was the only covariate of interest that was significantly related to Black students' perceptions of equity (diversity $\gamma = .56, p < .001$; FARMs rate, suspension rate, *ns*). In contrast, both FARMs ($\gamma = -.59, p < .001$) and suspension rate ($\gamma = -.32, p = .013$) were significantly negatively associated with White students' perceptions of school equity, whereas student diversity was not significantly associated with White students' perceived equity.

School Belonging

Racial gap in out-of-school suspension. We found a statistically significant negative association between schools' Black-White suspension gap and Black students' sense of school

belonging, as hypothesized ($\gamma = -0.50, p < .001$). For White students, a non-significant, positive association with sense of school belonging was found.

Level 1 covariates. The association between the Black-White suspension gap and Black students' reports of school belonging remained significant even after accounting for other demographic factors. Student SES was not significantly associated with school belonging, but grade level was ($\gamma = -0.04, p = .001$), indicating that older students reported lower levels of belonging. Male gender was also significantly positively associated ($\gamma = 0.19, p < .001$), indicating that males reported significantly higher levels of school belonging than females. Among White students, male gender and SES were significantly positively associated (both $\gamma = 0.13, p < .001$), whereas grade-level was negatively associated ($\gamma = -0.04, p < .001$).

Level 2 covariates. FARMs was significantly negatively associated with Black students' ($\gamma = -0.41, p = .028$) and White students' ($\gamma = -0.60, p < .001$) perceptions of school belonging, indicating that both student groups perceived lower levels of school belonging in low-SES schools. Student diversity was positively associated with Black students' perceptions of school belonging ($\gamma = 0.46, p = .011$), but not significantly associated with White students' perceptions. Suspension rates were not significantly associated with belonging among Black students or White students.

Adjustment Problems

Racial gap in out-of-school suspension. As hypothesized, we found that Black students reported higher levels of adjustment problems in schools with higher Black-White suspension gaps ($\gamma = .77, p < .001$). In contrast, we found no significant association between Black-White suspension gap and adjustment problems among White students.

Level 1 covariates. The significant finding of an association between the Black-White suspension gap and adjustment problems among Black students held even when accounting for male gender ($\gamma = -.19, p < .001$), grade-level ($\gamma = -.08, p < .001$), and student SES ($\gamma = -.13, p < .001$), which were all significantly inversely associated with Black students' reports of adjustment problems. Among White students, grade-level ($\gamma = -.05, p < .001$) and student SES ($\gamma = -.20, p < .001$) were both significantly inversely associated with adjustment problems, but not male gender (*ns*).

Level 2 covariates. At the school-level, none of the other covariates were significantly related to Black students' perceptions of adjustment problems (FARMs, suspension rate, and student diversity; all *ns*). For White students, the school percentage of enrollment eligible for FARMs was significantly positively associated with reports of adjustment problems ($\gamma = .61, p < .001$), indicating that White students reported higher levels of adjustment problems in lower-SES schools. Student diversity was significantly inversely associated with adjustment problems ($\gamma = -.27, p = .021$), whereas suspension rate was significantly positively associated with White students' reports of adjustment problems ($\gamma = .38, p = .013$).

Discussion

A large and growing literature examines the potentially harmful effects of out-of-school suspension, which disproportionately removes Black youth from U.S. schools (e.g., Fabelo et al., 2011). The present study is, to our knowledge, the first quantitative analysis to explore the contextual effects of discipline disparities on students' perceptions of themselves and their schools, regardless of whether they have been suspended or not. It is novel in its use of multilevel analysis to examine school discipline disparities as a feature of the school context

negatively associated with protective factors such as perceived equity and school belonging, and positively associated with adjustment problems.

To explore the degree of discipline disparity as an attribute of each school, schools were characterized utilizing an objective indicator of Black students' risk of out-of-school suspension relative to White students' risk in the 2011-12 school year. Of note, only four of the study's 58 schools had lower Black student risk of suspension; in all other schools, suspension risk was greater for Black students. We then examined schools' racial gaps in out-of-school suspension in relation to Black and White students' perceived school equity, school belonging, and adjustment problems in the subsequent school year (2012-13). The study findings shed light on how racial differences in schools' use of out-of-school suspension may be negatively associated with Black students' experience of supportive school climate and, in turn, positively associated with adjustment problems. The findings have implications for educational practice and policy to support Black youth in schools marked by inequality in discipline practices.

Perceived Equity

As hypothesized, schools' Black-White suspension gap was significantly inversely associated with Black students' perceptions of school equity, even when accounting for a host of other student and school-level covariates, whereas White students' perceptions of school equity were not significantly associated with their school's Black-White suspension gap. This finding suggests that Black students perceived lower levels of school equity (i.e., fair and inclusive treatment of students by schools regardless of race, gender, SES, and cultural background) in schools marked by higher levels of racial disparity in suspension rates. This interpretation is supported by an extensive literature which suggests that youth of color and other marginalized groups (e.g., sexual minorities) are more likely to perceive discriminatory treatment in schools

(Benner & Graham, 2013; LaFromboise, Hoyt, Oliver, & Whitbeck, 2006; Le & Stockdale, 2011; McLaughlin, Hatzenbuehler, & Keyes, 2010; Tummala-Narra & Claudius, 2013). Prior research highlights the important role of school norms of fairness, inclusion, and respect for diversity in fostering a safe and positive school climate (Thapa, Cohen, Guffrey, & Higgins-D'Alessandro, 2013). Our finding suggests that, in schools with larger discipline disparities, Black students may perceive a more negative school climate than their White classmates within the same schools; this in turn, may have implications for the wide range of emotional, psychological, behavioral, and physical health outcomes that have been linked to positive school climate (Thapa et al., 2013).

Contrary to our hypotheses, grade-level, student SES, school SES (FARMs), and suspension rate were not significantly associated with perceived equity in the Black student sample. These non-significant results suggest the salience of racial disparity in school discipline as it relates to Black students' perceptions of school equity, regardless of student gender, SES, or grade-level – and regardless of the school's overall suspension rate and proportion of low-SES (FARMs). The finding of a positive significant association of student diversity with perceived equity among Black students in this model was particularly surprising, as it challenges prior research that has found school diversity (i.e., both heterogeneity diversity and minority concentration) to be negatively associated with perceived school equity (Bottiani, Bradshaw, & Mendelson, 2016; Debnam, Lindstrom Johnson, Waasdorp, & Bradshaw, 2012). Because we found a significant, positive, school-level correlation between the racial gap in out-of-school suspension and racial and ethnic heterogeneity of student enrollment (shown in Table 2), further research exploring how school diversity and school discipline disparities may operate in tandem is needed to replicate and further understand these conflicting findings.

School Belonging

We found in this study that greater racial gaps in out-of-school suspension risk were associated with significantly lower levels of reported school belonging among Black students, whereas the association was not significant in the White student sample. This finding suggests that, when Black students are more frequently removed from the school than their White classmates, it may send a message to all students (suspended or not) about the degree to which Black students are welcome and accepted in the school social context. Although not directly related, research on discrimination at school lends some support to this interpretation, as such experiences have been linked to students' interrupted school bonding (Dotterer & Lowe, 2015).

Although we did not measure perceived discrimination in this study, it may be worth exploring its potential to explain Black students' lower levels of school belonging in schools with racial disparities in school discipline in future research. Theory suggests that Black youth who experience discrimination in school may develop identities in concert with peers that are antagonistic to prosocial norms of the broader school culture (Fordham & Ogbu, 1986), which may disrupt their sense of school belonging. Moreover, emerging research on school racial climate and racial identity processes has underscored the importance of person-context fit as it relates to school engagement among Black youth (Byrd & Chavous, 2011, 2012). Thus, future research directly examining whether Black youth experience school-level discipline disparities by race as a form of discrimination, even when not directly impacted (i.e., not suspended) may be fruitful in advancing our understanding of how the Black-White discipline gap within a school could influence Black students sense of school belonging. These dynamics likely vary depending upon the racial and ethnic diversity of the school (Benner & Graham, 2013), which is why we accounted for school diversity in our analysis. Particularly because school diversity was found to

be significantly associated with Black students' school perceptions in this model, future research on discipline disparities should continue to account for variation in school racial/ethnic diversity.

Adjustment Problems

In this study, we found that Black students' reports of adjustment problems were significantly positively associated with Black-White disparity in suspension risk, whereas no significant association was found with White students' reports of adjustment problems. One possible explanation for this finding may be the potential role of stereotype threat (Steele & Aronson, 1995). Stereotype threat has been defined as "the arousal, worrying thoughts, and temporary cognitive deficits evoked in situations where a group member's performance can confirm the negative stereotype about their group's ability in that domain," (Rydell, Rydell, & Boucher, 2010, p. 885). Racial gaps in school discipline rates within a school may raise racial stigma to conscious awareness among Black students within that context (Benner & Graham, 2013). Thus, it is plausible that schools with large enough racial disparities in suspension rates to be apparent to students may prompt responses during disciplinary encounters akin to stereotype threat. A classroom disciplinary interaction may trigger stereotype threat more readily in highly disproportionate schools, which in turn could escalate the disciplinary encounter, resulting in a disciplinary sanction issued by a teacher, whereas the encounter may not have unfolded in this way in the absence of the stereotype threat being activated. Most research on stereotype threat among Black individuals suggests the effects are primarily relevant to academic performance (Steele & Aronson, 1995; Steele, Spencer, & Aronson, 2002); however, research on stereotype activation and behavior has generally shown that people subsequently behave in ways consistent with the stereotype (Wheeler & Petty, 2001). This is also consistent with the inverse of the Pygmalion Effect – the Golem Effect – which theorizes that lower expectations lead to poorer

performance (Babad, Inbar, & Rosenthal, 1982). The activation of stereotype threat within disproportionate disciplinary contexts is a potential avenue for future research to further elucidate the current findings.

The racial gap in out-of-school suspension was not associated with adjustment problems among White students; however, it is noteworthy that student diversity was significantly *inversely* associated in this subgroup, suggesting that White students reported lower levels of adjustment problems in schools with a higher degree of heterogeneity in the racial/ethnic composition of their student enrollment. This finding is consistent with prior research regarding the benefits of school diversity for non-minority students (e.g., Siegel-Hawley, 2012), and may suggest that school diversity could function to mitigate adjustment problems for White students. This interpretation would be consistent with research finding that contact with students of other races and ethnicities generates more knowledge and awareness of different cultural backgrounds, which in turn increases empathic feeling and reduces anxiety (Pettigrew & Tropp, 2008). Another plausible reason for this finding may simply be that White students feel better about themselves in more diverse contexts, possibly due to observed differential treatment by school staff or due to their own self-comparisons. These potential pathways, which may explain the inverse association of diversity and adjustment problems among White students, are important for future research to examine.

Although exploring potential mediating mechanisms represents an important next step for future inquiry, these processes are likely bidirectional. Future studies measuring both student-reported data and discipline disproportionality rates at multiple time points are needed to better establish temporality and therefore inform our understanding of the potential directionality of these influences. For example, research assessing perceived discrimination as a potential

mediating mechanism between school discipline disparity and social-emotional disparities among Black youth may help to explain the finding of higher levels of reported adjustment problems by Black students in school with larger Black-White school discipline gaps. A number of studies have reported that adolescents who perceived more racial or ethnic discrimination also reported more psychological distress, low self-esteem, and depression (e.g., Benner & Kim, 2009; Brody et al., 2006; Grossman & Liang, 2008; Prelow, Danoff-Burg, Swenson, & Pulgiano, 2004; Seaton, Caldwell, Sellers & Jackson, 2010) and more discrimination and externalizing behaviors (Bogart et al., 2013) and anger (Wong, Eccles, & Sameroff, 2000).

Limitations and Strengths

There are some limitations of this study that warrant consideration when interpreting the findings. First, the results should be interpreted with caution because of the potential that the degree of discipline disparity may have changed during the one-year time lapse between the collection of discipline disproportionality data and student-reported outcomes. We did not exclude 9th graders (28.9% of enrollment in this sample), who would not have been in the school in the prior year. In the 2012-13 school year, the state of Maryland's mobility rate was 18.4% (with 9.3% entrants and 9.1% withdrawals), which suggests there may have been additional students not present in the school from the year prior. Thus, there is a likelihood that a fair percentage of the school enrollment changed during the 1-year lapse. However, prior research suggests that discipline disparities remain relatively stable over time (Noltemeyer & McLoughlin, 2010). Specifically, in comparing the disproportionality indices from 2009-10, 2010-11, and 2011-12 in the U.S. DOE Civil Rights Data Collection for the state of Maryland, Conner, Porowski, and Passa (2014) found that the Black-to-White risk ratio of out-of-school suspension was fairly stable at about 2.5 to 2.8 during these three years. Thus, the assumption

that incoming students experienced a similar rate of disproportionality as occurred in the year prior is reasonable. An advantage of using disproportionality data from an earlier time point is that it helps to demonstrate temporality, at least to some extent. Although causal inferences cannot be drawn from these analyses, the fact that the disproportionality data were collected prior to the data on student perceptions and functioning is consistent with the study's central premise that higher rates of disparate discipline practices would precede Black students' poorer psychological adjustment.

Another potential limitation is that the data in this secondary analysis come from a group randomized controlled trial. This could have introduced confounding in the analysis; however, for several reasons, we argue there is very little to no potential for this to have impacted our findings. Although it is possible that the positive behavior supports condition schools could have reduced their use of out-of-school suspension between the 2011-12 year and the year in which we collected student survey data (2012-13), it is still unlikely there would have been a differential reduction in the racial gap in out-of-school suspension risk in the condition schools. Prior research has found racial disparities to persist even in schools implementing positive behavioral supports (Vincent, Sprague & Gau, 2013). The likelihood of this is also minimal given the early implementation stage of school-wide supports, which are slow to be codified as school practice. Nevertheless, we treated condition as a potential confounder and statistically controlled for it in our analyses; none of the associations were significant.

Another limitation is that we were not able to hone in on the role of gender in the discipline gap in the present analysis. In light of the striking excess of school punishment of Black males, we understand the role of gender is critical to consider in examinations discipline disproportionality. However, in this analysis, there was not sufficient justification to exclude

Black females from a school-level characterization of the discipline gap, as this subpopulation is also affected by discipline disproportionality. Black females have higher suspension rates than White males at both elementary and secondary school levels (Losen et al., 2015). Although beyond the scope of the present study, future studies may seek to run multiple models with gender-adjusted risk disparities to explore how the patterns of findings may vary when incorporating race by gender specific ratios. For example, perhaps higher Black female to White male risk indicators are significantly associated with differential levels of adjustment and perceptions of equity and school belonging in these same comparison groups. Achieving this level of specificity in the pattern of findings would further bolster the argument that discipline disparities are discernible to students and affect their views of the school and themselves.

One last caution to the reader is that the student-level SES proxy for maternal education, “How far did your mother go in school?” did not specify to survey participants whether the “graduated from college” response option meant graduating with a 4-year degree or a 2-year degree. The phrase ‘graduated from college’ may be subject to interpretation based on one’s background. For example, ‘graduated from college’ may be assumed to mean a 4-year Bachelor’s degree; however, it is possible that students responding to the survey understood ‘graduating from college’ to mean obtaining a 2-year Associates degrees or other community college certificates. Acknowledging the weaknesses of this method of discerning SES, maternal education nonetheless is a commonly used measure of SES (Krieger, Williams, & Moss, 1997); its inclusion in our models was theoretically and statistically informative, and better than the alternative to drop it entirely.

Despite the study’s limitations, we believe the significant associations found between school-level discipline disparities and Black students' reports of adjustment problems and

perceptions of school belonging and equity suggest that a new methodological focus on discipline disparity as a school contextual factor is needed. Methods to examine the effects of the school social context of the discipline gap should quantify the gap at the school-level and employ multilevel methodology, as well as incorporate mixed methods approaches to further clarify findings. Prior research on this topic is almost exclusively qualitative, and no studies have directly examined data from different sources to validate Black students' school perceptions in relation to objectively differential school practices. Although we were not able to explore the pathways mediating the associations found, such as perceived discrimination (as we have hypothesized in our discussion), the study nonetheless breaks new ground in examining an important developmental determinant that may be uniquely relevant to Black youth and play a role in explaining seemingly intractable school inequalities. We believe these findings suggest that discipline disparities may extend beyond the direct impact on suspended students; additional research is needed to better understand the within-school social and ecological implications of racialized punishment on Black students' development.

Practice Implications and Conclusions

This study explored an important gap in our knowledge regarding the influence of Black-White suspension risk disparities on Black and White students' perceived school equity, school belonging, and self-reported adjustment problems. We found that Black students' perceptions of equity and school belonging were significantly inversely associated with Black-White suspension risk disparity, whereas no significant association was found in the White student sample. Moreover, we found that Black students reported higher rates of adjustment problems in schools with higher Black-White suspension disparities, whereas this association was non-significant for White students. These findings raise a number of key questions for future research

about potential mediating mechanisms; they also prompt further consideration of appropriate ways to measure school climate to account for the potential influence of differential school discipline in students' experience of school climate.

The results highlight the need for more research on interventions that can ultimately eliminate the discipline gap. For example, it may be possible to effectively coach teachers and administrators to implement alternative responses during vulnerable decision points in their disciplinary encounters with Black students (McIntosh, Girvan, Horner, & Smolkowski, 2014). Interventions targeting school staff mindfulness and stress management (e.g., Bottiani et al., 2012; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013) may also have potential to restrict bias in disciplinary interactions.

Despite longstanding efforts to curb school inequity, discipline disparities persist. This study's findings suggest that, in addition to introducing alternatives to suspension (e.g., restorative justice programming) and equity focused interventions to eliminate the gap (e.g., culturally responsive classroom behavior management), more immediate supports for Black youth in schools with highly differential discipline practices may be needed. Students' experiences of equitable and inclusive school climate are an important potential target for improvement by school administrators, teachers, and school counseling staff, particularly in light of research suggesting that school climate is malleable to intervention (Bradshaw, Koth, Thornton, & Leaf, 2009). Specifically, the direct engagement of Black youth in efforts to address their schools' differential discipline practices may have potential to alter their perceptions of belonging, inclusion, and fair treatment at the school, in addition to potentially contributing to changes in school discipline practices. Work by Day-Vines and Terriquez (2008) suggests that engaging Black and Latino youth in a stakeholder taskforce with decision-making power to

broach the issue of excessive suspensions may serve as a strengths-based framework consistent with positive youth development principles for stimulating leadership, self-management, resiliency, and social capital among participating youth. The findings of our study suggest the necessity of similar approaches that not only aim to stem the discipline gap (which may be a longer term goal), but that can also immediately engage Black youth in a dialogue about their perceptions of their schools' discipline practices. Initiatives to broach the issue of the discipline gap with Black students in high-disparity schools have potential to disrupt harmful perceptions of the school social context as unfair and unaccepting by demonstrating respect for the perspectives of Black youth and some readiness to change.

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Table 1

Student and School Characteristics

	Black Students	White Students
	(<i>n</i> = 7,064)	(<i>n</i> = 12,662)
Student characteristics	<i>n</i> (%)	<i>n</i> (%)
Maternal education		
Did not graduate from high school	641 (9.1)	995 (7.9)
Graduated from high school	1,919 (27.2)	3,698 (29.2)
Attended some college	1,706 (24.2)	2,388 (18.9)
Graduated from college	2,798 (39.6)	5,581 (44.1)
Grade Level		
9 th Grade	2,100 (29.7)	3,566 (28.2)
10 th Grade	1,693 (23.9)	3,240 (25.6)
11 th Grade	1,646 (23.3)	3,104 (24.5)
12 th Grade	1,625 (23.0)	2,752 (21.7)
Age ^a	15.9 (1.3)	15.9 (1.2)
Gender		
Male	3,547 (50.2)	6,337 (50.0)
Female	3,517 (49.8)	6,325 (50.0)
School characteristics (<i>J</i> = 58 Schools)	M (SD)	
School size (M)	1,262.9 (462.9)	
Free and reduced price meals (%)	37.5 (17.8)	
Student Diversity (M)	.57 (.20)	
Suspension rate (%)	17.2 (12.1)	
Suspension risk excess (Black risk minus White risk)	.11 (.1)	

^a Age represents mean with standard deviation in parentheses.

Table 2

Correlations of the Latent Within and Observed Between Variables

Within (Latent) – Black Students	1	2	
1. School Equity	-		
2. School Belonging	.48***	-	
3. Adjustment Problems	-.19***	-.18***	
Within (Latent) – White Students	1	2	
1. School Equity	-		
2. School Belonging	.55***	-	
3. Adjustment Problems	-.31***	-.28***	
Between (Observed)	1	2	3
1. FARMs	-		
2. Suspension	.55 ***	-	
3. Student Racial/Ethnic Diversity	.27*	.40**	-
4. Racial Out-of-School Suspension Gap	-.11 (ns)	-.21 (ns)	.30*

Note. To detect possible multicollinearity among the independent between variables, diagnostics were conducted to assess the variance inflation factors across all four predictors. The resulting value inflation factor statistics were all low, ranging between 1.5 and 1.9, suggesting the probability of multicollinearity problems in this analysis was minimal. $N = 7,064$ Black students and 12,662 White students, $J = 58$ schools. FARMs = percent of students in the school receiving free and reduced-priced meals. Racial/Ethnic Diversity is the normalized generalized variance (NGV) statistic, which reflects the racial and ethnic heterogeneity diversity of the student enrollment between 0.0 and 1.0, where higher proportion reflects greater diversity.

* $p < .05$, ** $p < .01$, *** $p < .001$, ns = non-significant.

Table 3

Associations of the Three Factor, Two-Level Confirmatory Factor Analysis with Covariates

Black Students (<i>n</i> = 7,064)					Perceived Equity				School Belonging				Adjustment Problems			
Student-level Variables					γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>
Male Gender					.07	*	.03	2.58	.19	***	.03	6.97	-.19	***	.03	-7.06
Grade Level					-.01	<i>ns</i>	.01	-0.80	-.04	**	.01	-3.20	-.08	***	.01	-7.07
SES					-.03	<i>ns</i>	.02	-1.95	.01	<i>ns</i>	.02	0.66	-.13	***	.02	-8.10
School-level Variables					γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>
Black-White Suspension Gap					-.54	***	.14	-3.72	-.50	***	.14	-3.69	.77	***	.17	4.44
FARMs					-.08	<i>ns</i>	.18	-0.46	-.41	*	.19	-2.20	-.04	<i>ns</i>	.21	-0.20
Suspension Rate					-.14	<i>ns</i>	.20	-0.72	.13	<i>ns</i>	.20	-0.67	.34	<i>ns</i>	.22	1.53
Student Diversity					.56	***	.16	3.53	.46	*	.18	2.55	-.33	<i>ns</i>	.22	-1.54
Condition					.04	<i>ns</i>	.17	0.27	-.03	<i>ns</i>	.16	-0.16	.13	<i>ns</i>	.18	0.70
White Students (<i>n</i> = 12,662)					Perceived Equity				School Belonging				Adjustment Problems			
Student-level Variables					γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>
Male Gender					.08	***	.02	3.70	.13	***	.02	6.87	.03	<i>ns</i>	.02	1.42
Grade Level					-.01	<i>ns</i>	.01	-1.10	-.04	***	.01	-5.82	-.05	***	.01	-6.28
SES					.08	***	.01	8.14	.13	***	.01	14.22	-.20	***	.01	-21.31
School-level Variables					γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>	γ	<i>p</i>	<i>SE</i>	<i>t</i>
Black-White Suspension Gap					-.11	<i>ns</i>	.13	-0.90	.01	<i>ns</i>	.15	0.07	-.01	<i>ns</i>	.12	-0.12
FARMs					-.59	***	.13	-4.66	-.60	***	.14	-4.18	.61	***	.13	4.53
Suspension Rate					-.32	*	.13	-2.47	-.19	<i>ns</i>	.17	-1.08	.38	*	.15	2.48
Student Diversity					.01	<i>ns</i>	.12	0.08	-.04	<i>ns</i>	.15	-0.24	-.27	*	.12	-2.30
Condition					-.02	<i>ns</i>	.10	-0.21	-.03	<i>ns</i>	.13	-0.21	.18	<i>ns</i>	.11	1.55

Note. Coefficients are standardized. *N* = 7,064 Black students, 12,662 White students. *J* = 58 schools. Model Fit: Black, χ^2 (146) = 543.21, *p* < .001, CFI = .99, TLI = .99, RMSEA = .02; White, χ^2 (146) = 1,697.75, *p* < .001, CFI = .99, TLI = .99, RMSEA = .03. Unadjusted ICCs, Black student subgroup Perceived Equity = .04, School Belonging = .08, Adjustment Problems = .02; White student subgroup Perceived Equity = .05, School Belonging = .09, Adjustment Problems = .03. Design effects for all latent variables were > 2.0 for both groups. Absolute difference in the percent between explained of the final model with Excess Black-White Suspension Risk and covariates relative to model with covariates only is, for Black students, +55.6% for Equity, +20.1% for School Belonging, and +20.6% for Adjustment Problems, and for White students, +0.1% for Equity, -1.0% for School Belonging, and 0.0% for Adjustment Problems. **p* < .05, ***p* < .01, ****p* < .001, *ns* = non-significant.

Supplemental Table A

Factor Loadings of the Three Factor, Two-Level Confirmatory Factor Analysis with Covariates

Item	Black		White	
	λ - Within	λ - Between	λ - Within	λ - Between
Belonging (At this school...)				
I feel like I belong	0.92	0.97	0.96	0.92
I feel close to people	0.73	1.07	0.79	0.98
I feel like I am part of this school	0.77	0.89	0.80	0.96
Equity (At this school...)				
Students of all races are treated the same	0.83	0.91	0.83	0.86
All students are treated the same, regardless of whether their parents are rich or poor	0.85	0.96	0.88	1.04
Boys and girls are treated equally well	0.82	1.00	0.81	1.00
The school provides instructional materials that reflect my culture, ethnicity, and identity	0.65	0.95	0.65	0.90
Adjustment Problems				
I have trouble controlling my temper	0.88	1.01	0.90	1.00
I have threatened to hit or hurt someone	0.68	0.84	0.73	0.97
I do things without thinking	0.58	0.86	0.62	0.98
I get mad easily	0.87	0.95	0.87	1.01

Note. Coefficients are standardized. All factor loadings are statistically significant at $p < .001$.

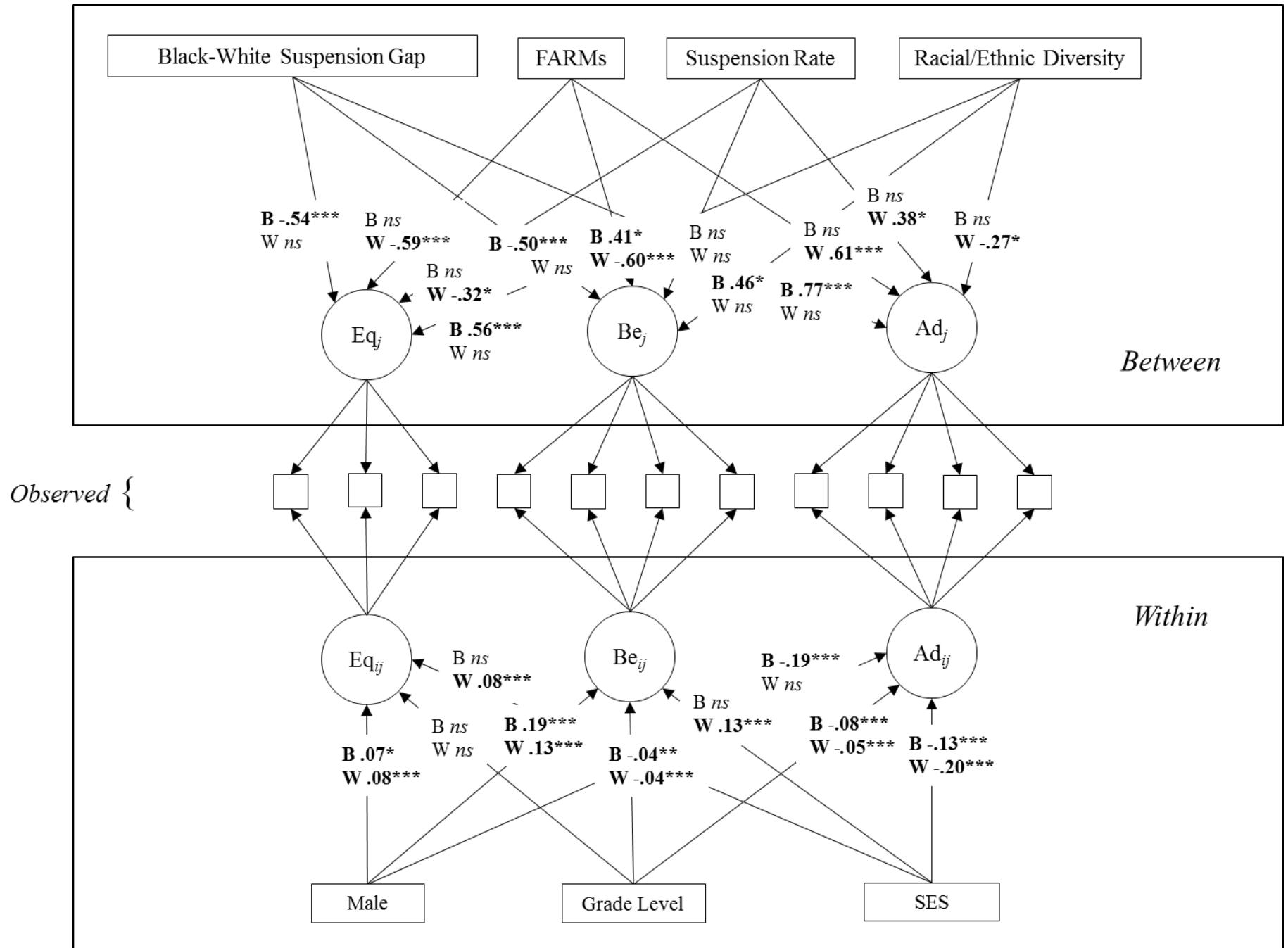


Figure 1. Results for the two-level, confirmatory factor analysis with covariates are noted B for the Black subgroup and W for the White subgroup. Error terms and correlations between latent variables are not depicted (see Table 3 for full results). Black-White Suspension Gap is the excess risk of out-of-school suspension among Black students relative to white students, where values greater than zero indicate higher suspension risk and values lower than zero indicate lower suspension among Black students relative to White students. Suspension rate is the percentage of the entire school's student enrollment who received one or more suspensions in the 2011-12 school year. FARMs is the percentage of students receiving free or reduced price meals. Racial/Ethnic Diversity is the normalized generalized variance (NGV) statistic, which reflects the racial and ethnic heterogeneity diversity of the student enrollment between 0.0 and 1.0, where higher proportion reflects greater diversity. Eq_j = Equity latent variable on the between-level; Be_j = Belonging latent variable on the between-level; Ad_j = Adjustment problems latent variable on the between-level. Eq_{ij} = Equity latent variable on the within-level; Be_{ij} = Belonging latent variable on the within-level; Ad_{ij} = Adjustment Problems latent variable on the within-level. All bold coefficients represent statistical significance, *ns* indicates non-significant associations. * $p < .05$, ** $p < .01$, and *** $p < .001$.